

AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR CONDITIONING ENGINEERS, INC.
1791 Tullie Circle, NE / Atlanta, GA 30329
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TC/TG/TRG MINUTES COVER SHEET

(Minutes of all TC/TG/TRG Meetings are to be distributed to all persons listed below within 60 days following the meeting.)

TC/TG/TRG NO.:	4.5	TC/TG/TRG TITLE:	Fenestration
DATE OF MEETING:	February 6, 2023	LOCATION:	Atlanta- Room M4 Willow and Virtual (Webex)
DATE ISSUED:	February 6, 2023	RECORDED BY:	Thanos Tzempelikos

Name	Affiliation	E-Mail	Member (VM, CM, Guest)	Present
<i>Mahabir Bhandari (Chair)</i>	Oak Ridge National Lab	bhandarims@ornl.gov	VM	Y
<i>Sagar Rao (Research)</i>	AEI	sagar.rao@outlook.com	VM	Y
Christian Kohler	LBNL	cjkohler@lbl.gov	VM	N
<i>Aziz Laouadi</i>	NRC Canada	Aziz.laouadi@nrc.ca	VM	N
<i>Iason Konstantzos (Vice/Program Subc)</i>	University of Nebraska Lincoln	lason.konstantzos@unl.edu	VM	Y
<i>Thanos Tzempelikos (Secretary)</i>	Purdue University	ttzempel@purdue.edu	VM	Y
<i>Gordon Thomas</i>	DASMA	gthomas@thomasamc.com	VM	N
<i>Bipin Shah</i>	WinBuild Inc	Winbuild.usa@gmail.com	VM	Y
<i>Ravi Srinivasan (Handbook)</i>	University of Florida	sravi@ufl.edu	CM	Y
<i>Anil Parekh</i>	Natural Resources Canada	Anil.Parekh@NRCCan.gc.ca	CM	N
<i>Charlie Curcija (Calculation Methods)</i>	Lawrence Berkeley National Lab	dccurcija@lbl.gov	CM	Y
<i>Peter Lyons</i>	Peter Lyons and Associates	peter.lyons@fenestralia.com	CM	N
<i>Samuel Taylor</i>		Samuel.taylor.sr@gmail.com	CM	Y
<i>Niraj Kunwar</i>	Oak Ridge National Lab	Kunwarn1@ornl.gov	CM	Y
<i>Alliston Watts</i>	NREL	alliston.watts@nrel.gov	Guest	Y
<i>Won Hee Ko</i>	NJIT	wonhee.ko@njit.edu	PCM	Y
<i>Aslihan Karatas</i>	UIC	akaratas@uic.edu	Guest	Y
<i>Dave Monsour</i>	DASMA	dmonsou@thomasamc.com	Guest	Y
<i>Edward Louie</i>	PNNL	edward.louie@pnnl.gov	Guest	Y
<i>Jean-Michel Dussault</i>	Veridis Solutions inc	jean-michel.dussault@veridissolutions.com	CM	Y
<i>Mike Hammond</i>	Vitro Architectural Glass	mhammond@vitro.co,	CM	Y
<i>Mike Thoman</i>	NFRC	mthoman@nfrc.org	PCM	Y

<i>Rob Tenent</i>	NREL	robert.tenent@nrel.gov	Guest	Y
<i>Robert Hart</i>	LBNL	rghart@lbl.gov	CM	Y
<i>Weihuan Zhao</i>	Northeastern State University	zhaow@nsuok.edu	PCM	Y
<i>Marc LaFrance</i>	DOE	marc.lafrance@ee.doe.gov	Guest	Y
<i>Costa Kassis</i>	Univ of waterloo	costa.kassis@uwaterloo.ca	Guest	Y
<i>Eric Peterson</i>	Univ of Leeds	e.peterson@leeds.ac.uk	Guest	Y
<i>Pat Marks</i>	JCI	patrick.c.cmarks@jci.com	Guest	Y
Total voting members: 8 Voting members present: 5				

Meeting started: 2:30 pm EST

SCOPE:

TC 4.5 is concerned with the identification and evaluation of all physical properties of (1) glasses and other glazing materials, (2) shading and shielding materials and devices, and (3) control devices and strategies which influence the radiant, conduction, and convection transfer of both heat and light through fenestration systems. It is also concerned with the development of procedures for calculating and measuring solar heat gain, daylight admission, and heat transfer through fenestration systems.

COMMITTEE AND MEETING INFORMATION

TC Web Site: <http://tc0405.ashraetcs.org>

Basecamp: <https://3.basecamp.com/3106353/projects>

INTRODUCTIONS AND ROSTER CHECK

- 5 VMs present, quorum was achieved.

APPROVE MEETING AGENDA

Agenda was approved unanimously.

APPROVE MINUTES FROM PREVIOUS MEETING

Minutes were approved unanimously.

ANNOUNCEMENTS (TC Chair)

ASHRAE strategic plan extended to 2025
Decarbonization efforts and initiatives are primary focus
International members are encouraged
ASHRAE is back to normal budget situation

TC LEADERSHIP

Roster changes:

Iason Kostantzos will be Chair from June 2023.

Christian Kohler and Gordon Thomas need to be replaced.

Robert Hart from LBNL and Dave Monsur from DASMA were the potential new VMs.

Bipin moves and Thanos seconds. 5-0-0 votes. Total 8 VMs.

Robert Hart and Dave Monsur are new voting members effective after the ASHRAE Annual Meeting in June 2023.

Niraj will be the new Program Subcommittee Chair.

LIAISON REPORTS

Technical Activities Committee (TAC) – Vance Payne

- Section Head present- main announcements about updating roster changes

Research Activities Committee (RAC)

- No liaison present.
- Contact: RL4@ashrae.net

RBC Liaison

- No update provided

Conferences and Expositions Committee (CEC)

No liaison present.

Handbook Committee

No liaison present.

Chapter Technology Transfer Committee

No liaison present.

ASHRAE Learning Institute (ALI) / Professional Development Committee (PDC) –

No liaison present.

Special Publications

No liaison present.

Standards

No liaison present.

SUBCOMMITTEE REPORTS

Research (Sagar Rao)

RTARs in preparation (4)

WS (2): 1925 and 1926

RPs (1): 1789: need more bidders: Weihuan Zhao is willing to apply

Long-Range Research Plan:

- Characterizing Thermal Performance of VIG (need to discuss state of the art and priorities)
- Dynamic window shades and glass to support decarbonization of buildings
- Long term performance and durability of dynamic windows
- Embodied carbon- need significant industry involvement

Program (Iason Konstantzos)

Proposed Seminars

No submissions for Atlanta 2023

Potential seminar topics for next meetings:

Windows and decarbonization (seminar)

Life cycle cost of windows and embodied carbon

For ASHRAE 2024 Winter meeting

Seminar on daylight transmission through windows- Thanos

Technical session on sensing technologies for windows -Thanos

Proposed Forum/seminar

Emerging Window Technologies- Charlie/Marc LaFrance -Robert Tenent might want to chair that

Future items

BIPV windows Robert Hart– 6.7 will co-sponsor

Window life cycle and decarbonization- Ravi

Marc's idea: window attachments for disadvantaged communities (poor quality products) -Rob Tenent

Rob Tenent: durability studies

Calculation Methods (Charlie Curcija)

No action item

Handbook (Ravi Srinivasan)

- Ravi provided update on different tasks being carried out on handbook update- will arrange individual meetings with people who volunteered
- DEADLINE: May 2024 to submit to ASHRAE
- Sam Taylor might send some bibliography to update the handbook

Standards (Chris Mathis)

Not attending

TC 4.5 Website (Niraj Kunwar)

No action item

OLD BUSINESS

None.

NEW BUSINESS

None.

ADJOURN
4:10 pm EST

Prepared by Thanos Tzempelikos